

Listing of Claims:

Claims 1-29 (Canceled).

30. (Currently Amended) An ophthalmologic instrument intended for measuring the aberrations of the a human eye, comprising:

5 a point light source which is projected onto the a retina of the eye to create a virtual light source thereon on it, the wherein radiation of which the virtual light source is scattered by the retina [[,]] and then passes through the optical systems of the eye and becomes phase-modulated, and wherein the modulation corresponding corresponds to the a total of optical 10 aberrations of the eye;

a measuring system for measuring the a shape of the a wavefront of the radiation leaving the eye, the and outputting an output signal of which is passed to the a control system of the instrument;

15 a system for compensating for said aberrations, located between the eye and the measuring system and transmitting the radiation leaving the eye, which wherein said system comprises a refraction compensator that controls focusing of the radiation scattered by the retina and an astigmatism compensator located at 20 the an image plane of the a pupil of the eye;

a projector of test patterns, which, jointly with said compensators refraction compensator and astigmatism compensator, projects the an image of a test pattern onto the retina.

31. (Currently Amended) The instrument of claim 30, wherein the refraction compensator comprises a movable prism and a dichroic mirror which are placed between two lenses, and wherein said dichroic mirror ~~also serving~~ is operable as a beam-splitter 5 ~~used~~ to align the instrument.

32. (Currently Amended) The instrument of claim 30, wherein the astigmatism compensator comprises: (i) one of two cylindrical ~~or~~ lenses of opposite signs and two toric lenses of opposite signs, ~~which can be~~ wherein said lenses are independently ~~rotated~~ 5 rotatable around the an optical axis of the compensator, and (ii) a system for ~~precisely~~ setting the initial turning angles of said lenses.

33. (Currently Amended) The instrument of claim 30, further comprising a built-in automatic calibration system which uses an additional virtual light source as a test element ~~that allows~~ precisely measuring ~~the~~ to measure current positions of the 5 compensators.

34. (Currently Amended) The instrument of claim 30, further comprising an alignment system which ~~allows adjusting the~~ adjusts a proper distance between the eye and the instrument.

35. (Currently Amended) An ophthalmologic instrument intended for measuring ~~the~~ aberrations of ~~the~~ a human eye, comprising:

5 a point light source which is projected onto ~~the~~ a retina of the eye to create a virtual light source thereon, on it, the wherein radiation of ~~which~~ the virtual light source is scattered by the retina [[,]] and then passes through ~~the~~ optical systems of the eye and becomes phase-modulated, and wherein the modulation corresponding corresponds to ~~the~~ a total of optical 10 aberrations of the eye;

a measuring system for measuring ~~the~~ a shape of ~~the~~ a wavefront of the radiation leaving the eye, the and outputting an output signal of which is passed to the a control system of the instrument;

15 a system for compensating for said aberrations, located between the eye and the measuring system and transmitting the radiation leaving the eye, ~~which wherein~~ said system comprises a refraction compensator that controls focusing of the radiation scattered by the retina, an astigmatism compensator located at

20 ~~the~~ an image plane of ~~the~~ a pupil of the eye, and a compensator of high-order aberrations;

25 a projector of test patterns, which, jointly with said compensators refraction compensator, astigmatism compensator and compensator of high-order aberrations, projects ~~the~~ an image of a test pattern onto the retina.

36. (Currently Amended) The instrument of claim 35, wherein the refraction compensator comprises a movable prism and a dichroic mirror which are placed between two lenses, and wherein said dichroic mirror also serving is operable as a beam-splitter required to align the instrument.

37. (Currently Amended) The instrument of claim 35, wherein the astigmatism compensator comprises: (i) one of two cylindrical or lenses of opposite signs and two toric lenses of opposite signs, which can be wherein said lenses are independently rotated rotatable around ~~the~~ an optical axis of the compensator, and (ii) a system for precisely setting ~~the~~ the initial turning angles of said lenses.

38. (Currently Amended) The instrument of claim 35, further comprising a built-in automatic calibration system which uses an additional virtual light source as a test element ~~that allows~~

5 ~~precisely measuring the~~ to measure current positions of the
compensators.

39. (Currently Amended) The instrument of claim 35, further comprising an alignment system which ~~allows adjusting the~~ adjusts a proper distance between the eye and the instrument.

Claims 40-43 (Canceled).